

Patent
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17. (Amended) A method of managing texture data, the method comprising the steps of:

storing a texture map set in a texture memory, the texture map set comprising two or more layers; and

retrieving one or more packets from the texture memory, each packet comprising texture data from one or more texture layers.

REMARKS

Claims 1-15 and 17-41 are pending in the application. Claim 16 has been canceled. Claims 1 and 17 have been amended herein. Attached hereto, captioned "**Version with markings to show changes made**", is a marked-up version of the changes made to the specification and to the claims. Claims 1, 17, 27 and 40 are independent.

Claims 1-41 were rejected under 35 USC 103(a) as being unpatentable over US Patent 6295068 (Peddada et al.) in view of US Patent 6229553 (Duluk Jr. et al.). This rejection is traversed and reconsideration is respectfully requested.

Independent Claim 1 has been amended herein and is directed to a system for managing texture data, the system including a texture memory controller coupled to a texturing engine and a texture memory coupled to the texture memory controller. The texture memory is configured to store texture data in a texture map set, the texture map set comprising two or more texture layers. The texture memory controller is configured to access one or more packets from the texture memory and pass the packets to the texturing engine, each packet comprising texture data from at least two texture layers.

Independent Claim 17 has been rewritten in independent form and is directed to a method of managing texture data, the method comprising storing a texture map set in a texture memory, the texture map set comprising two or more layers, and retrieving one or more packets from the texture memory, each packet comprising texture data from one or more texture layers.

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Applicant's system and method as defined by amended independent Claims 1 and 17, respectively, allow the texturing engine to render surfaces that have an apparent thickness where the upper layers are partially transparent and sub-surface details show through the upper layers.

Applicant respectfully submits that neither Peddada nor Duluk teaches or suggests a system or method for managing texture data in which a texture memory controller retrieves one or more packets, comprising texture data from at least two texture layers, from a texture memory and passes the packets to a texturing engine.

Independent Claim 27¹ is directed to a method of surface depth texturing, the method comprising the steps of (1) determining a depth stepping angle, the depth stepping angle formed by a first vector from an eye point position to a fragment in a polygon surface and a second vector normal to the surface of the fragment; (2) converting the depth stepping angle to one or more texel offset values; (3) applying the texel offset values to a first texel in a first texture layer to find a corresponding second texel in a second texture layer; (4) blending one or more color values and one or more alpha values associated with the first and second texels to create an apparent surface depth for the fragment; and (5) applying the blended color values and alpha values to the fragment.

The Office Action merely states in paragraph 5 that "Peddada teaches a graphic system wherein a copy of an AGP texture in a local graphic memory is transparently managed. AGP transfers to the local graphics memory are performed transparently to high-level application. See Col. 8 lines 40-50".

Applicant respectfully submits that there is, again, absolutely no teaching or suggestion in either Peddada or Duluk of the method of surface depth texturing recited in independent Claim 27. Specifically, neither patent teaches or suggests determining a depth stepping angle, converting the angle to a texel offset value, and applying the offset value to a first texel value in a first texture layer to find a corresponding second texel in a second texture layer (i.e., Peddada fails to teach or suggest the utilization of *interpolated stepping values providing parallax between the various texture layers*).

¹ Independent Claim 40 is directed to a surface-depth texturing system and recites similar elements and limitations as those recited in independent Claim 27.

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For at least the foregoing reasons, Applicant respectfully submits that the cited references fail to even teach or suggest the elements recited in each of independent Claims 1 and 17, as amended herein, and 27 and 40, and that each of the independent claims are therefore patentable over Peddada and Duluk, taken in any permissible combination.

In addition, even *if* each of the elements of the recited claims were shown in either Peddada or Duluk (which as described above, Applicants submits they are *not*), of course the motivation to combine or modify prior art must flow from some teaching *in the art* that suggests the desirability or incentive to make the modification needed to arrive at the claimed invention. In re Napier, 34 USPQ2d 1782, 1784 (Fed. Cir.1995).

"Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination." The requisite motivation must come from the prior art and *not Applicants' specification*. In re Dow Chem. Co., 5 USPQ2d 1529, 1531-32 (Fed. Cir. 1988). When an invention is directed to a combination of elements, both the Federal Circuit and the Board have consistently reversed rejections found on references merely showing that the claimed elements or subcombinations of the claimed elements were known. Rather, "either the references must expressly or impliedly suggest the claimed combination or the Examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." Ex parte Clapp, 227 USPQ 972, 973 (Bd. Pat. App.& Int. 1985).

Here the Peddada and Duluk patents, at least, fail to suggest the claimed combination. Therefore, since there is no factual basis in the record for the making the proposed combination, there is no prima facie case of obviousness and the rejection should be withdrawn.


Dependent Claims 2-15, 18-26, 28-39 and 41 are believed to be clearly patentable for all of the reasons indicated above with respect to Claims 1, 17, 27 and 40, one or another from which they depend, and even further distinguish over the cited references by reciting additional limitations. For example, dependent Claim 2 further recites the limitation that the "packet comprises color values associated with one color, the color values being from two or more texture layers". The Action takes the position (paragraph 3) that "Peddada teaches a graphic

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system - it is inherent that every graphic image (layers) having color values associating therewith". Applicant respectfully submits that it is *not inherent* that the packets passed from the texture memory to the texturing engine would comprise color values *being from two or more texture layers*. Individual reconsideration of each of the dependent claims is also respectfully requested.

It is respectfully submitted that in regard to the above amendment and remarks that the pending application is patentable over the art of record and reconsideration is accordingly requested. Should the Examiner be of the view that an interview would expedite consideration of this Amendment or of the application at large, request is kindly made that the Examiner telephone the Applicant's undersigned attorney at (908) 518-7700 in order that any outstanding issues may be resolved.

Respectfully submitted,


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Version with markings to show changes made

In The Claims

Claim 16 has been canceled without prejudice and without disclaimer of subject matter.

Claims 1 and 17 have been amended as follows.

1. (Amended) A system for managing texture data, the system comprising:
a texture memory controller coupled to a texturing engine; and
a texture memory coupled to the texture memory controller, the texture memory
configured to store texture data in a texture map set, the texture map set comprising two or more
texture layers, wherein the texture memory controller is configured to access one or more packets
from the texture memory and pass the packets to the texturing engine, each packet comprising
texture data from [one or more] at least two texture layers.

17. (Amended) [The] A method of [Claim 16, further comprising] managing
texture data, the method comprising the steps of:
storing a texture map set in a texture memory, the texture map set comprising two or
more layers; and
retrieving one or more packets from the texture memory, each packet comprising texture
data from one or more texture layers.

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